Paper No. 12

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

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Ex parte JOHN R. RUCKER

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Appeal No. 2001-2451
Application 09/157,705

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ON BRIEF

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Before OWENS, WALTZ and TIMM, *Administrative Patent Judges*.

WALTZ, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision from an appeal of the examiner's final rejection of claims 1 through 15, which are the only claims pending in this application. We have jurisdiction pursuant to 35 U.S.C. § 134.

According to appellant, the invention is directed to a multi-component mattress and furniture insulator pad where the pad is formed with a polyurethane core foam sheet, a stiffening layer attached to each side of the core foam sheet, and outer

polyurethane foam sheets adjacent to the top surface of each stiffening layer (Brief, page 2). Appellant states that claims 13 to 15 are separately patentable from claims 1 to 12 (Brief, page 4) and provides reasonably specific, substantive reasons for the separate patentability of these claims on pages 12-13 of the Brief. Accordingly, we select one claim from each group of rejected claims and decide the grounds of rejection on the basis of these claims alone, with additional consideration of claims 13-15 to the extent they have been separately argued. *See In re McDaniel,* 293 F.3d 1379, 1383, 63 USPQ2d 1462, 1465 (Fed. Cir. 2002), and 37 CFR § 1.192(c)(7)(1997). A copy of illustrative independent claim 1 is attached as an Appendix to this decision.

The examiner has relied upon the following references as evidence of unpatentability:

Lappala	2,999,041	Sep. 5, 1961
Wiegand	3,923,293	Dec. 2, 1975
Fracalossi et al. (Fracalossi)	4,385,131	May 24, 1983
Quinn	5,429,852	Jul. 4, 1995

Claims 1 and 3-7 stand rejected under 35 U.S.C. § 102(b) as anticipated by Lappala (Answer, page 3). Claims 8-9 and 13-15 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Lappala (*id.*). Claim 2 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Lappala in view of Fracalossi (Answer, page

5). Claims 10-12 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Wiegand in view of Fracalossi and Quinn (*id.*).

We *affirm* the examiner's rejection under section 102(b) over Lappala and the rejection of claims 8-9 under section 103(a) over Lappala. All other rejections on appeal are *reversed.* Accordingly, the examiner's decision to reject the claims on appeal is *affirmed-in-part.* Our reasoning follows.

OPINION

A. The Rejection under § 102(b)

The examiner finds that Lappala discloses a composite material comprising an inner foam core and two outer foam layers where a reinforcing scrim or netting is disposed between the inner foam core and each of the outer foam layers (Answer, page 3). The examiner further finds that the foam layers may all comprise polyurethane foam while the reinforcing scrim or netting may comprise polyethylene fibers, with the scrim or netting bonded to the foam by means of an adhesive (*id.*, citing col. 2, ll. 34-40; ll. 49-51; ll. 55-57; col. 3, ll. 9-23, Fig. 3; and col. 5, ll. 74-75). Accordingly, the examiner finds that Lappala teaches the claimed structure (Answer, page 7).

A rejection based on section 102(b) for anticipation or lack of novelty must establish that every limitation of the claimed subject matter is described, either expressly or under the principles of inherency, by a single reference. *See In re King,* 801 F.2d 1324, 1326, 231 USPQ 136, 138 (Fed. Cir. 1986); *In re Schreiber,* 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. Cir. 1997). The examiner, as discussed above, has found that Lappala describes layers corresponding to each layer or component recited in claim 1 on appeal.[1] Appellant argues that Lappala does not show a structure with stiffening layers and does not relate to mattress and furniture pads that have sufficient stiffness to resist bending and telegraphing (Brief, page 5; Reply Brief, page 1). Appellant further argues that Lappala's unwoven multi-filamentary rovings 19 or strands 13 are not the "stiffening layers" required in claim 1 on appeal (Brief, page 6).

Appellant's arguments are not persuasive. Lappala specifically teaches that "care must be taken to provide an adequate number of grids or screens for *reinforcement* of the

[1] We note that outer resin film layers 15 and 21 in Figure 3 of Lappala are not required by claim 1 on appeal but are not excluded from the claim by the "comprising" language recited in the preamble of claim 1. *See Vehicular Techs. v. Titan Wheel Int'l, Inc.,* 212 F.3d 1377, 1383, 54 USPQ2d 1841, 1845 (Fed. Cir. 2000).

material [the polyurethane foam]." Col. 5, ll. 68-71, italics added. The "stiffening layers" required by claim 1 on appeal may be any material with stiffness that will offer dimensional stability to the insulator pad (specification, page 9, ll. 20-21). *See In re Morris,* 127 F.3d 1048, 1054, 44 USPQ2d 1023, 1027 (Fed. Cir. 1997)(the examiner must apply to the claim language the broadest reasonable meaning of the words in their ordinary usage as they would be construed by one of ordinary skill in the art, when read in light of the specification). The "stiffening layers" required by claim 1 on appeal may be the same material disclosed by Lappala (compare claim 3 on appeal with Lappala, col. 2, ll. 35-41). Finally, the result of using the stiffening layers as recited in claim 1 on appeal is to form a pad "with a sufficient stiffness to resist bending and telegraphing." As correctly argued by the examiner (Answer, page 7), the claim is not specific to any degree of stiffness or resistance to bending and therefore the material of Lappala meets this limitation since the composite of Lappala would possess at least some degree of resistance to bending and telegraphing.

For the foregoing reasons and those recited in the Answer, we determine that the examiner has established that Lappala describes every limitation recited in claim 1 within the meaning

of 35 U.S.C. § 102(b). Accordingly, we affirm the examiner's rejection of claim 1, and claims 3-7 which stand or fall with claim 1, under 35 U.S.C. § 102(b) as anticipated by Lappala.

B. The Rejection under § 103(a) over Lappala

The examiner incorporates the findings from Lappala as discussed above (Answer, page 3). With regard to claims 8-9, the examiner takes notice that both heat activatable adhesives or layers joined by flame lamination are "well known and conventional means of bonding foam layers." *Id.* Appellant does not contest the examiner's statement (Brief, pages 4-7). Accordingly, we adopt the examiner's statement as a fact and affirm the rejection of claims 8-9 under 35 U.S.C. § 103(a) as obvious over Lappala.

With regard to claims 13-15, the examiner admits that the stiffness modulus of the foam composite material is not disclosed by Lappala (Answer, page 4). However, the examiner finds that the stiffness modulus of the composite material would be dependent, at least in part, upon the thickness of the foam core, and therefore it would have been obvious to have optimized the stiffness modulus of the pad by controlling the thickness of the pad. *Id.*

Appellant argues that making a very flexible material thicker will not cause the material to become significantly stiffer (Brief, page 12). Appellant also argues that the denier disclosed by Lappala relates to thickness and mass, not rigidity, and there is no suggestion in Lappala of a stiffness modulus as high as 100 psi as required by claims 13-15 (Brief, pages 12-13; Reply Brief, page 3).

We agree with appellant that the examiner has not met the initial burden of proof in establishing a *prima facie* case of obviousness, namely the examiner has failed to establish that thickness is directly related to stiffness and is a result effective variable. *See In re Oetiker,* 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). Given the flexibility desired by Lappala for the composite material, the examiner has not presented any convincing evidence or reasoning as to why a high stiffness modulus such as required by claims 13-15 would have been desired by one of ordinary skill in the art, nor why one of such skill would have increased the thickness when Lappala teaches that the foam thickness must not be too great (col. 5, ll. 65-73).

For the foregoing reasons, we determine that the examiner has not established a *prima facie* case of obviousness for the

subject matter of claims 13-15 in view of the reference evidence. Accordingly, we reverse the examiner's rejection of claims 13-15 under section 103(a) over Lappala.

C. The Rejection of claim 2 under § 103(a)

The examiner applies Lappala as discussed above and cites Fracalossi for the teaching that rebonded polyurethane foams are "especially useful because these foams have improved flame resistance." Answer, page 5. Accordingly, the examiner concludes that it would have been obvious to have used the foams of Fracalossi in the composite of Lappala in order to enhance the flame resistance of the composite material. *Id.*

It is well settled that when a combination of references is used to support a rejection, it is incumbent upon the examiner to show clear and particular evidence of a motivation, suggestion or reason to combine the references as proposed. *See In re Dembiczak,* 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999). As correctly argued by appellant (Brief, page 8; Reply Brief, page 4), Lappala and Fracalossi are not directed to the same field of invention and Lappala does not disclose or suggest any problem with flame resistance. Accordingly, there is no evidence in the art presented by the examiner of a motivation, suggestion or reason to substitute the bonded polyurethane of

Fracalossi for the polyurethane foam of Lappala. Furthermore, the examiner has not presented any evidence or reasoning that the bonded polyurethane of Fracalossi, useful for cushioning or seating structures, would be acceptable or desirable in the uses of Lappala, i.e., that bonded polyurethane would have the desired properties such as flexibility to be useful as a convertible top, insulating material, soundproofing material, or construction material as taught by Lappala.

For the foregoing reasons, we determine that the examiner has not established a *prima facie* case of obviousness in view of the reference evidence. Accordingly, we cannot sustain the rejection of claim 2 under section 103(a) over Lappala in view of Fracalossi.

D. The Rejection of claims 10-12 under 35 U.S.C. § 103(a)

The examiner finds that Wiegand teaches a mattress and furniture pad comprising an inner foam core, with stiffening layers of a polyethylene or polypropylene netting attached to both the first and second surfaces of the inner foam core, and an outer layer of a cushioning material such as a foam may be bonded to the upper surface of the foam core (Answer, pages 5-6). The examiner further finds that Wiegand does not teach using polyurethane as the inner foam core but applies Fracalossi for

the teaching that rebonded polyurethane foams are especially useful in cushions since these foams have improved flame resistance (Answer, page 6). Finally, the examiner finds that Wiegand does not teach bonding a layer of polyurethane foam to the bottom of the composite and applies Quinn for the teaching that forming a bottom foam layer on a cushioning pad keeps the pad from slipping during use (*id.*). From these findings, the examiner concludes that it would have been obvious to use the rebonded foams of Fracalossi in the material of Wiegand, as well using a bottom foam layer on the cushioning pad of Wiegand as taught by Quinn (*id.*). We disagree.

As discussed above, it is well settled that when a combination of references is employed to support a rejection, it is incumbent upon the examiner to present a compelling motivation, suggestion or reason to combine the references as proposed. *See In re Dembiczak, supra.* We determine that the examiner has not presented any convincing evidence to support the proposed combination of references.

Contrary to the examiner's assertion (Answer, page 10), Wiegand does not teach that polyethylene is the "preferred" foam over polyurethane but teaches that polyethylene has the "strength and structural rigidity required for a spring insulator which the

ordinary foam cushioning plastics such as polyurethane foam do not possess" (col. 1, ll. 59-64). Any teaching away from the claimed subject matter must be considered in an obviousness analysis. *See In re Gurley,* 27 F.3d 551, 553, 31 USPQ2d 1130, 1131 (Fed. Cir. 1994). Although Wiegand teaches that the plastic net will reinforce the polyethylene foam sheet (col. 2, ll. 54-60), the examiner has not presented any evidence or reasoning why one of ordinary skill in this art would have expected the rebonded polyurethane of Fracalossi to have sufficient strength and rigidity, even in conjunction with plastic netting, to be useful in the composite of Wiegand, especially in view of the teaching away from conventional polyurethane foam in Wiegand.

Additionally, we note that Wiegand teaches that the plastic netting will "tend to prevent any creeping of the [polyethylene] sheet within the spring cushion assembly" (col. 2, ll. 57-59), and the examiner has not stated why the foam layer of Quinn would be necessary to keep the Wiegand pad from slipping during use. Finally, we note that the examiner finds that Wiegand discloses an outer layer of a cushioning material (such as a polyurethane foam) may be bonded to the first major surface of the foam core (Answer, sentence bridging pages 5-6, see col. 2, ll. 38-42). However, claims 10-12 also require the pad of claim 1, including

five layers, in combination with springs and a furniture cushion (see claim 10 on appeal). Contrary to the examiner's assertion (Answer, page 10), Wiegand does not teach several layers of cushioning material as required by these claims on appeal.

For the foregoing reasons and those set forth in the Brief and Reply Brief, we determine that the examiner has failed to establish a *prima facie* case of obviousness in view of the reference evidence. Accordingly, we cannot sustain the examiner's rejection of claims 10-12 under 35 U.S.C. § 103(a) over Wiegand in view of Fracalossi and Quinn.

E. Other Issues

Upon return of this application to the jurisdiction of the examiner, the examiner and appellant should reconsider the patentability of the claims in view of Burke, U.S. Patent No. 4,758,299, issued Jul. 19, 1988, previously made of record (see Figure 2; col. 1, ll. 42-55; and col. 3, ll. 4-48).

F. Summary

The examiner's rejection of claims 1 and 3-7 under 35 U.S.C. § 102(b) over Lappala is affirmed. The rejection of claims 8-9 under 35 U.S.C. § 103(a) over Lappala is also affirmed.

The rejection of claims 13-15 under 35 U.S.C. § 103(a) over Lappala is reversed. The rejection of claim 2 under 35 U.S.C.

§ 103(a) over Lappala in view of Fracalossi is reversed. The rejection of claims 10-12 under 35 U.S.C. § 103(a) over Wiegand in view of Fracalossi and Quinn is reversed.

The decision of the examiner is affirmed-in-part.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED-IN-PART

Terry J. Owens Administrative Patent Judge	)	
Thomas A. Waltz Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
Catherine Timm Administrative Patent Judge	)	

TAW/cam

APPENDIX

1. A dimensionally stable mattress and furniture insulator pad, comprising:

a polyurethane core foam sheet having an upper surface and a lower surface;

a first stiffening layer having an upper face and a lower face, wherein the lower face is attached to the upper surface of the core foam sheet;

a second stiffening layer having an upper face and a lower face wherein the upper face is attached to the lower surface of the core foam sheet;

a first outer polyurethane foam sheet attached adjacent to the top face of the first stiffening layer so that the first stiffening layer is substantially completely covered by the outer foam sheet; and

a second outer polyurethane foam sheet attached adjacent to the bottom face of the second stiffening layer so that the second stiffening layer is substantially completely covered by the outer foam sheet;

so that the core foam sheet with first and second stiffening layers and first and second outer foam sheets attached thereto forms the dimensionally stable mattress and furniture insulator pad with a sufficient stiffness to resist bending and telegraphing.

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